Dairy Farmer Insights into Natural Disasters

Recovery

Recovery from natural disasters starts when an immediate response is no longer needed. The journey of recovery is unique for each farmer with respect to the timeframe and priorities involved, which often depend on the impacts to the dairy, property, household and local community.

Background

This case study is based on information collected through face to face interviews with 20 NSW dairy farmers. Interviews were conducted at the end of 2023 with farmers who were impacted by recent natural disasters. Farmers were asked to describe how they made decisions and what actions they took to respond and recover from natural disasters (floods, prolonged wet events, bushfires and droughts).

Farmers were located in major dairying communities along the coastline as well as inland. Most farm businesses were medium sized (between 150 to 300 cows) while approximately a quarter were large in scale (more than 300 cows). A small proportion were businesses with 150 cows or less.

The experiences of recovering from a range of natural disasters (particularly the prolonged wet as a 'novel' disaster event) reveals the recovery process as

both an opportunity and a challenge. At certain points in recovery, the focus was on repairing and restoring the farm, while at other points, the focus was on improving the dairy business as well as the health and wellbeing of the people involved. This case study outlines what was involved in the recovery process and includes suggestions to improve future recovery actions.

Experiencing the recovery process

Recovery time for dairy farmers was variable depending on the type of natural disaster event, the extent of impact and what the vision for recovery looked like. Most farmers talked about their natural disaster recovery in ways that suggested it was a protracted process involving various setbacks related to:

- weather - waiting period for things to dry out
- complexities around managing the farm with a reduced milking platform while paddocks undergoing restoration were removed from the grazing rotation
- settling on the best methods to repair damaged pastures/crops and compacted soils
- unexpected damage to infrastructure
- financial constraints
- unavailable trade contractors, dairy technicians, veterinarians who specialise in reproduction or farm staff to assist with repair work

Recovery can be challenging because it involves a lot of 'learning by doing' (which can mean making mistakes). While complex, the experience of having recovered (partially or fully) from a natural disaster event gave farmers a sense of achievement and reinforcement of what their good management decisions were. It also brought a sense of being better prepared to manage the next natural disaster event with farmers being able to reflect on and learn from their recovery actions. This lifelong learning process can be enhanced by having constructive discussions with others about what worked well and what could be done differently next time.

Assessment of recovery progress

For some farmers, recovery was perceived as returning their farm performance to a similar level as it was before a natural disaster event. In resilience terms, this would be considered a 'bouncing back' recovery response – striving to return to a former state where the dairy business is performing in a Business as Usual (BAU) way.

> *[Vision for recovery is] [b]ack to where we were. The cows are going back on grass. The fences are fixed. (Dairy Farmer, Hunter, 2023)*

Cows feeding at a temporary feedpad

Other farmers indicated that their recovery efforts were about getting their dairy system back on a continuous improvement trajectory or seeing opportunities for making changes i.e. a 'build-back-better' approach to recovery. Resilience in this context is about retrospective learning from a disruptive event to adapt a system to new conditions.

> The flooding and the amount of damage we sustained is a catalyst for a lot of improvement. So, farm layout has changed; fencing, which was pretty poor across the farm previous to the floods, has been or is being improved. From an agronomic point of view, we made a really concentrated effort on improving pasture availability and quality. And I think we've done really well in that. (Dairy Farmer, South Coast and Highlands, 2023)

In terms of self-assessing the extent of their own recovery, most farmers responded in the context of recent floods (2022) and prolonged wet events (2021-2022). Of the 14/20 dairy farmers who quantified their recovery from recent natural disasters, most dairy farmers (80%) considered themselves over half-way to full recovery including some farmers who thought themselves as fully recovered. In the two cases related to bushfire recovery, the levels of recovery were 50% and 80% respectively.

A sense of recovery varied amongst farmers because each farmer used slightly different indicators for gauging their own recovery progress, although could be summarised into three elements related to productivity, physical and personal recovery (Figure 1). A list of different indicators used by the farmers to signal recovery are described in Table 1.

Figure 1. The main elements of recovery included productivity (e.g. milk yield), physical (e.g. infrastructure, paddocks and feedbase, herd health and cash flow) and personal/emotional (e.g. physical and mental wellbeing).

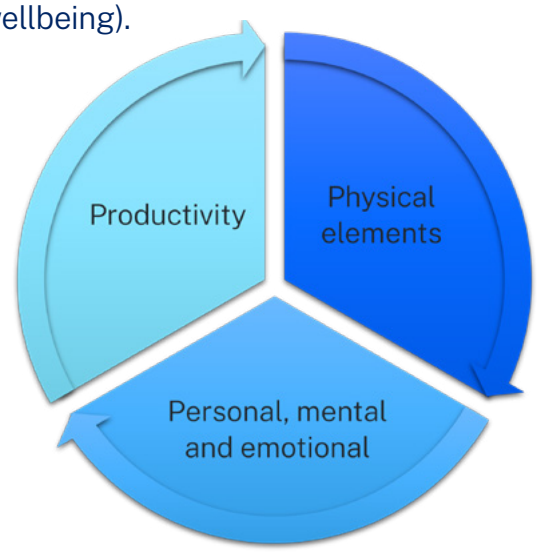

Table 1. Indicators dairy farmers use to signal their own recovery from a natural disaster event.

Component of dairy system	Indicator of Full Recovery
Whole dairy system	• Dairy farm being considered operational/functional across all components
Infrastructure and farm layout	• Infrastructure repaired, replaced or improved for (close to) 100% functionality (e.g. fences, water troughs, sheds, laneways, effluent ponds, roadways) • Having the house and garden looking well cared for again
Milk production	• Milk production returns to or exceeds pre-natural disaster volumes

Table 1. Continued

Component of dairy system	Indicator of Full Recovery
Financial	• Returning milk production and herd size back to BAU levels relates to cashflow and therefore financial recovery (e.g. to pay the bills, recruit staff)
Feedbase	• Repaired and productive paddocks (no pugging and levelled) i.e. paddocks back to 80-100% utilization for grazing or growing fodder crops with a return to desired growth rates • Restoring soil fertility • Not buying in feed if you would normally graze and conserve your own feed (or if you are buying in feed, this feed only makes up a small proportion of the daily diet) • Returning to normal grazing regimes
Herd health and size	• Herd size returning to pre-natural disaster numbers with a steady flow of replacement stock – either through breeding or purchased stock • Returning to BAU calving patterns based on building up cow fertility again • Cows with a good body condition score and milking well again
Human wellbeing	• Farming families and workforce emotionally recovering from the stress of a natural disaster • A return to community life and being involved with community events and organisations • Having the capacity to maintain or recruit staff to assist in the dairy business

Complete recovery sometimes meant that all these variables were fully functioning again, however it was noted by some dairy farmers that **the rate of recovery for each component can be different and doesn't always happen simultaneously**. Therefore, while a return to milk yield might have occurred, there may be other indicators that had not yet returned to their "original" state (e.g. a significant proportion of paddocks still undergoing repair or disruption to breeding/calving patterns). This means that recovery can progress in an 'uneven' way.

A key challenge with an uneven recovery is that it is difficult to assess and identify at what point a dairy system is transitioning from survival mode to recovery mode, and therefore recognising when you have fully recovered. Uneven recovery also requires continual assessment of the recovery situation which can include finding additional or unforeseen impacts from a natural disaster event. This means constantly reconfiguring your recovery priorities, which can be mentally demanding.

We've sort of fully recovered operationally and emotionally I suppose… but we've still got fences to do, we've still got laneways to do. But the day-to-day running of the farm, I think we're back where we need to be. It's more moving forward I guess preparing for the next [natural disaster] rather than recovering from the last one. (Dairy Farmers, South Coast and Highlands, 2023)

It would have been 18 months before all my fences were put back to pre-flood because you're not only looking at the flooded ones, but all my top ones were [also] taken out by landslides. So, what the floods didn't get the landslides got. I've still got tracks on the hill that aren't cleared. I ran out of money to clear them. I did the things that were more urgent in fencing. We've still got paddocks that are…critically damaged and that's just going to take time. You can fix paddocks up, but you also have to have the right conditions to fix them up. (Dairy Farmer, Far North Coast, 2023)

Factors that may assist recovery

Farmers interviewed indicated a number of things that can assist with starting and progressing towards recovery:

Personal capabilities/capacities

- Being prepared to make decisions early in the recovery process rather than procrastinating – this avoids unnecessary delays and the potential worsening of a situation.
- Ability to see the situation in a logical manner so recovery is seen to have a clear pathway to follow e.g. using formal or informal recovery plans
- Prioritising is important – remembering that not everything needs to be done simultaneously helps ease the stress of managing the recovery process

Farm business model

- Being in a strong/profitable financial situation before the natural disaster event assists in decision-making i.e. decisions do not have to be made solely from a position of having limited financial resources
- Having multiple business partners own/operate a small family business means decisions and actions taken are a shared responsibility – this can assist with lifting the mental load on any one person and draws in different ideas about how recovery could proceed

Support from people/organisations

It is not always obvious what needs to happen next to assist recovery, particularly if there is mental fatigue or ideas have been exhausted. This is often when external support is sought. Examples of valued support includes:

- Discussing the recovery process with others (family, staff, and advisers/consultants) to get different perspectives and draw on external skills and expertise to put priorities into action
- Being well connected to the dairy industry through professional and social networks which facilitates access to up-to-date information and a range of 'tested' options for recovery
- Having good relationships with suppliers (e.g. feed suppliers) to secure reliable and responsive service
- Having a multi-year contract with a milk processor assists with decision-making, creating business plans and paying for recovery efforts (locked in price offers additional clarity on income)
- Accessing a generalist advisor to provide integrated advice and priority setting for recovery at a whole farm system level
- Accessing public funds to contribute towards recovery costs (e.g. grant money and freight subsidies)

I think we've come out of [the natural disaster] reasonably well. The recovery grants were huge. If we hadn't had access to the recovery grants – they're probably the difference between us coming out of it in a reasonable financial position as to us coming out of it with a whole heap of debt. (Dairy Farmer, South Coast and Highlands, 2023)

Conclusion

Every dairy farmer and farming team will have their own path for recovery to navigate, where small achievements along the way can bring back a sense of being in control and moving forward. Dairy farmers indicated benefits from making recovery decisions that:

- do not rely solely on intuitive decision making for recovery. Seeking and considering a range of inputs from advisors, and the experiences of other farmers, can assist to identify recovery options and opportunities (e.g. feedpads, temporary fencing, laneway resurfacing, supplementary feeding regimes, direct drilling techniques and selecting suitable pasture/crop species for paddock restoration).
- recognise the 'unevenness' of recovery. Recovery is not simply the restoration of milk yield - other components of the dairy business will need time and resources to recover, and recovery is often impacted by multiple factors and setbacks.
- consider health and wellbeing (of themselves, family and staff). Physical fatigue can often be easily detected, but mental fatigue may not emerge immediately, and it is important to consider both while recovering the dairy business.

The lessons learned from the recovery experiences of interviewed dairy farmers imply that natural disaster and dairy industry policies need to reflect the importance of investing in dairy services that adopt a whole dairy farm system approach to better assist with managing the interdependencies involved in the recovery process, coordinating practical on ground assistance for recovery (e.g. managing livestock feed access, repair work of on farm access roads/laneways, workforces for fence repairs) as well as the resourcing of personnel that can provide expertise in designing recovery plans for a range of natural disaster events.

Sward of pasture

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